WHAT IS CLAIMED IS:

1.   A database system comprising a center server, a single or a plurality of local servers, a first network for mutually connecting said center server and said local servers, local storage subsystems for storing local databases managed by said local servers, a center storage subsystem for storing replications of said local databases and a second network for mutually connecting said center server, center storage subsystem, local servers and local storage subsystems, wherein

said center server includes replication requesting means for requesting said local servers to replicate local databases and data consolidating means for performing a process for consolidation of replicated local databases; and

each of said local servers includes local database freeze requesting means responsive to the database replication request to request a database management system to freeze said local database, and database replicating means for causing said local storage subsystem to replicate, in said center storage subsystem, said local database stored in said local storage subsystem.

2.   A database system according to claim 1, wherein

said center storage subsystem includes replication local databases representing replications of said local databases stored in said local storage

subsystems;

each of said local storage subsystems includes remote volume replicating means for transferring information of an update applied to said database to said center storage subsystem through said second network; and

said center storage subsystem reflects the transferred update information upon said replication local database.

3.   A database system according to claim 1, wherein

each of said local storage subsystems includes remote volume splitting means for temporarily stopping transfer of update information between said local database and said replication local database and remote volume resynchronizing means for resuming the transfer of update information between said local database and said replication local database and transferring the update information accumulated in said local storage subsystem during interruption of the transfer of update information to said center storage subsystem; and

a local database freeze operation and a remote volume split operation are executed on the basis of the request for database replication made to said local server from said center server and said local database is split from said replication local database to thereby synchronize these databases mutually.

4.   A database system according to claim 1, wherein

said local server includes remote volume split completion notifying means for informing said center server that the split by said remote volume splitting means is completed, and local database freeze release requesting means for requesting release of the freeze of local database; and

when the split between said replication local database and said local database is completed, said local server issues the remote volume split completion notice and a local database freeze release request.

5.   A database system according to claim 1, wherein

said center storage subsystem includes shadow images of said replication local databases, volume replicating means for reflecting the update information applied to said replication local databases upon said shadow images, volume splitting means for temporarily stopping the reflection of update information upon said shadow images, and volume synchronizing means for resuming the reflection of update information upon said shadow images;

said center server includes center database freeze requesting means for making a request for database freeze of said shadow images and center database freeze release requesting means for making a request for release of freeze of said shadow images;

and

said center server receives a remote volume split release requesting notice to issue the center database freeze request and volume synchronization request and when synchronization of volume is completed, executes the volume split operation and issues the center database freeze release request.

6.   A database system according to claim 1, wherein

said center server has a replication source managing table for managing whether replications of replication source local databases are completed; and

when synchronization between all the local databases managed by the local storage subsystems connected through said first and second networks and the replication local databases corresponding to all of said local databases is completed, said center server issues the center database freeze request, volume synchronization request, volume split request and center database freeze release request.

7.   A database system according to claim 1, wherein

said center server includes data consolidation completion notifying means for informing said local servers of completion of data consolidation; and

each of said local servers includes remote volume resynchronization requesting means responsive to

the notice by said data consolidation completion
notifying means to request said remote volume
resynchronizing means to resume transfer of update
information between said local database and said
replication local database.

8.   A center server in a database system having a
center server, a single or a plurality of local servers,
a first network for mutually connecting said center
server and said local servers, local storage subsystems
for storing local databases managed by said local
servers and a second network for mutually connecting
said center server, center storage subsystem, local
servers and local storage subsystems, wherein

said center server includes replication
requesting means for requesting said local servers to
replicate local databases and data consolidating means
for performing a process for consolidation of said
replicated local databases.

9.   A center server according to claim 8 further
comprising:

means responsive to a notice of remote volume
split completion based on a request for replication
made to the local databases to request database freeze
applied to shadow images of said replication local
databases, means for requesting volume synchronization,
means for requesting volume split when synchronization
of volume is completed to perform volume replication
for reflecting information of updates applied to said

replication local databases upon the shadow images, and means for requesting center database freeze release.

10.   A method for accessing a database system having a center server, a single or a plurality of local servers, a first network for mutually connecting said center server and said local server, local storage subsystems for storing local databases managed by said local servers, a center storage subsystem for storing replications of said local databases and a second network for mutually connecting said center server, center storage subsystem, local servers and local storage subsystems, wherein

said center server requests said local servers to replicate local databases and performs a process for consolidation of said replicated local databases; and

each of said local servers responds to a request for database replication from said center server to request a database management system to freeze said local database and cause said local storage subsystem to replicate, in said center storage system, the local database stored in said local storage subsystem.

11.   A database system access method according to claim 10, wherein

said local storage subsystems transfer information of updates applied to said local databases to said center storage subsystem through said second

network; and

said center storage subsystem reflects the transferred update information upon replication local databases representing replications of said local databases stored in said local storage subsystems.

12.   A database system access method according to claim 10, wherein

said local storage subsystems respond to a request from said local servers based on a request for replications of local databases made by said center server to said local servers to temporarily stop the transfer of update information between each of said local databases and each of said replication local databases so as to split remote volumes and respond to a request for resynchronization based on a database consolidation completion notice from said center server to said local servers to resume the transfer of update information between each of said local databases and each of said replication local databases so that the update information accumulated in said local storage subsystems during interruption of the transfer of update information is transferred to said center storage subsystem to perform remote volume resynchronization.

13.   A database system access method according to claim 10, wherein

said center server responds to a notice of remote volume completion to request freeze of databases

corresponding to shadow images of said replication local databases and request volume synchronization to synchronize a bitmap portion between the shadow images and the replication local databases, and when the synchronization of volume is completed, requests volume split to perform volume replication for reflecting the update information applied to the replication local databases upon the shadow images and thereafter requests release of the center database freeze.

14.   A process program for executing a process in a center server in a database system having said center server, a single or a plurality of local servers, a first network for mutually connecting said center server and said local servers, local storage subsystems for storing local databases managed by said local servers, a center storage subsystem for storing replications of said local databases, and a second network for mutually connecting said center server, center storage subsystem, local servers and local storage subsystems, said process program comprising:

a module for making a request to said local server for replication of said local database;

a module for receiving a notice of remote volume split completion based on the replication request made to said database;

a module for requesting database freeze of a shadow image of said replication local database;

a module for requesting volume

synchronization;

a module for requesting volume split when the volume synchronization is completed to perform volume replication for reflecting update information applied to the replication database upon the shadow image; and

a module for thereafter requesting release of freeze of the center database.

15. A process program for executing a process in a local server in a database system having said center server, a single or a plurality of local servers, a first network for mutually connecting said center server and said local servers, local storage subsystems for storing local databases managed by said local servers, a center storage subsystem for storing replications of said local databases, and a second network for mutually connecting said center server, center storage subsystem, local servers and local storage subsystems, said process program comprising:

a module responsive to a request for replication of said database from said center server to request a database management system to freeze said local database;

a module for requesting said local storage subsystem to cause it to replicate, in said center storage subsystem, said local database stored in said local storage subsystem;

a module for receiving a notice of split completion from said local storage subsystem based on

said replication request; and

a module for informing said center server of the split completion.

16.   A database system comprising:

a center server;

local servers;

local storage subsystems which store local databases; and

a center storage subsystem which stores replication local databases representing replications of said local databases, wherein

said local servers are mutually connected through a first network;

said center server, said center storage subsystems, said local servers and said local storage subsystems are mutually connected through a second network;

said center server includes a replication requesting unit which requests said local servers to replicate local databases and a data consolidating unit which performs a process for consolidation of said replicated local databases; and

each of said local servers includes a local database freeze requesting unit responsive to a database replication request from said center server which requests a database management system to freeze said local database, and a database replicating unit which causes said local storage subsystem to replicate,

in said center storage subsystem, said local database
stored in said local storage subsystem.

17. A database system according to claim 16,
wherein

each of said local storage subsystems
includes a remote volume replicating unit which
transfers information of an update applied to said
local database to said center storage subsystem through
said second network; and

said center storage subsystem includes a
volume replicating unit which reflects the transferred
update information upon said replication local database.

18. A center server in a database system, wherein
said center server is connected to a single
or a plurality of local servers through a first network
and is connected to said local servers, local storage
subsystems which store local databases and a center
storage subsystem which stores replications of said
local databases through a second network; and

said center server includes a replication
requesting unit which requests said local servers to
replicate said local databases, and a data
consolidating unit which performs a process for
consolidation of said replicated local databases.